Assessing the Impact of Performance-Based Training

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Several recent studies have found a correlation between turbidity and the likelihood of removal of *Cryptosporidium* oocysts from drinking water (Patania, 1996; Nieminski, 1995; and others). If these microbial contaminants are found in water supplies, lowering turbidity using filtration technology can significantly reduce the chances of consumer exposure to *Cryptosporidium*.

Through its Area-Wide Optimization Program (AWOP), the OGWDW's Technical Support Center works with states and water system operators to optimize the effectiveness of water filtration technology. The goal of the AWOP is to reduce the number of particles (turbidity) in filtered drinking water. Water systems that fully participate in this program receive intensive performance-based training (PBT). As a result of PBT, water systems have demonstrated the ability to meet or exceed the latest federal turbidity requirements. The study objective was to quantify the potential public health benefits of PBT, given the scientific literature describing the relationship between turbidity and *Cryptosporidium* removal.

To support the analysis, five state agencies provided turbidity data to the OGWDW. As a result of this collaborative effort, the OGWDW plans to modify how it works with states and public water systems. Specifically, the OGWDW will implement improvements to the optimization program using this kind of statistical approach to assessing program effectiveness.

Further, this study has the broader potential to improve the U.S. Environmental Protection Agency's (U.S. EPA) ability to use statistical analysis, combined with risk assessment methodology, to demonstrate the potential public health benefits of its technical assistance and training programs.

This poster describes the data collected, the statistical model used to estimate the effect of PBT, and the resulting parameter estimates. An approach for estimating the resulting human health benefits is also described.